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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

FISCHMANN, BRYAN R

ART UNIT	PAPER NUMBER
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3618

DATE MAILED: 03/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/827,173

Applicant(s)

HARRIS, ET AL

Examiner

Bryan Fischmann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Nov 16, 2001

2a) ☐ This action is FINAL.

2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-17 is/are pending in the applica

4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-17 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on Apr 6, 2001 is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4 & 6

20) ☐ Other:

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Specification

1. The disclosure is objected to because of the following:

A) On page 1, it is requested Applicant indicate that Application 09/056,109 is now abandoned.

B) The following recited phrases are unclear, awkwardly worded, and/or grammatically incorrect:

1) In paragraph 0026, lower portion, a blank space is required between the words "a" and "lead".

2) Paragraph 0030 recites "buss 16". According to Webster's Collegiate Dictionary, 10th Edition, the correct spelling of this word is "bus", as opposed to "buss". See also numerous instances where this same word is used on sheets 8-11 and 13-16.

3) The middle portion of paragraph 0042 recites "driving connected to an generator 22". This recited phrase is grammatically incorrect.

4) The wording on lines 3-5 of paragraph 0058 is considered awkward.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

A) Claim 12 recites "an electric motor coupled to said chassis and to said wheel". It is not believed that the specification discloses that an electric motor is coupled to the chassis and the wheel.

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B) Claim 14 recites "a scissor type lifting mechanism". It is not believed that the specification discloses this type of lifting mechanism.

Information Disclosure Statement

3. The IDS submitted 07-16-2001 (paper 4) from the AIRTRAX corporation seems to show the Instant Invention publicly disclosed before the priority filing date by Applicant. It is therefore requested Applicant clarify if the Applicant's were the inventor's of the Airtrax Power Supply Module disclosed on paper 4, so that a determination may be made whether the Airtrax Power Supply Module disclosed on paper 4 is available as prior art under 35 USC 102a.

4. On the IDS submitted 11-16-2001 (paper 6) the Examiner has lined-out the last US reference and "relocated" it to the "Foreign Patent Documents" section, as the last US reference listed (1,129,709) is actually a British Patent. Also, sheet 2 of this IDS was "lined-out", as it contains no prior art.

Drawings

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the electric motor coupled to a chassis and wheel as recited in claim 12, the scissor type lifting mechanism as recited in claim 14, and the external combustion engine comprising a gas turbine as recited in claims 16 and 17 must be shown or the features canceled from the claims. No new matter should be entered.

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6. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 4-6 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Wild, US Patent 3,497,027.

Wild teaches a removable power source comprising:

a housing (41');

a battery (110) disposed within said housing;

an electrical power generator (85 and 86) disposed within said housing; and

a power control module (114) disposed within said housing; and coupled to said battery

(Figure 7) and electrical power generator (Figure 7) and arranged to supply power (via 162 and 164) to a machine (160) from either said battery or said generator (sources of power in Figure 7).

Regarding the recitation of "machine" in claim 1, note that lines 30-32 of column 7 recites "The electrically powered accessories of the vehicle 20, such as the head lights, radio, cigarette lighter, etc. are represented in block form in FIG. 8 at 160". The "etc". would be

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understood to also include windshield wipers. Note also that Webster's Collegiate Dictionary, 10th Edition, defines "machine" as: "a constructed thing whether material or immaterial". Note that radios and windshield wipers, lights, etc., are "constructed things".

Regarding claim 2, see reference numbers 85 and 86 on Figure 6.

Regarding claim 4, compare Figures 3 and 6, also noting that battery 53 may also power reference number 160, when pod 40 is used in place of pod 40'.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wild, US Patent 3,497,027.

Wild teaches an internal combustion engine (85). Wild fails to teach that the internal combustion engine is a compression ignition engine (diesel), or rotary engine.

However, the Examiner takes Official Notice that compression ignition engine, or rotary engines are known to power similar type vehicles. Cars and pick-up trucks are well known to be powered by either reciprocating (piston-type) internal combustion, or diesel engines.

Additionally, the Examiner takes Official Notice that sports cars with rotary engines have been

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made. Diesel engines are advantageous in that they utilize higher compression ratios to increase efficiency. Rotary engines are known to be more efficient than reciprocating engines in that there is less wasted motion by engine components in producing output torque.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize compression ignition engine (diesel) or rotary engine for the internal combustion engine of Wild.

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wild, US Patent 3,497,027, in view of Drozd, et al, US Patent 6,242,873.

Wild fails to teach that the electrical power generator is a fuel cell. Wild instead teaches that the electrical power generator is an internal combustion engine.

However, both internal combustion engines and fuel cells are known to power vehicles. In the case of fuel cells, many "prototype" cars are now being, and have been developed to run on fuel cells. Therefore, internal combustion engines and fuel cells may be considered equivalent sources of power. Drozd provides a teaching of this (lines 7 and 8 of column 5). A fuel cell is advantageous over an internal combustion engine in that no harmful pollutants are generated from the fuel cell.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize fuel cell for the electrical power generator of Wild, as taught by Drozd.

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12. Claims 10-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gumpper, US Patent 1,527,431, in view of Wild, US Patent 3,497,027.

Gumpper teaches a vehicle comprising:

a chassis (1);

a wheel (3) rotatably attached to the chassis;

an electric motor (6) coupled to said chassis and to said wheel; and

a power source electrically coupled (via cables on Figure 2) to said electric motor, said power source comprising:

a power control module (22 - see lines 37-42 of sheet 2), and

an electrical power generator (9 and 14) coupled (via electrical system) to said power control module.

Gumpper fails to teach that the power source comprises a housing or a battery. Gumpper also envisions the power source comprising an engine (9) and generator (14) as a “semi-permanent” replacement (see lines 95-100 of sheet 1) for a battery, as opposed to an interchangeable replacement module.

However, Wild teaches a vehicle comprising a power source (40') further comprising a housing (41'), a battery (110) the power source being designed as an interchangeable replacement module (40') may be interchanged with (40). An “interchangeable” replacement power source, as taught by Wild, is advantageous over a “semi-permanent” power source, as taught by Gumpper, in that vehicles, such as fork lifts, which may be operated both indoors, requiring electric power

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with no emissions, and outdoors, where the efficiencies and convenience of an internal combustion engine is advantageous over batteries and emissions are not a problem, are able to be used both indoors and outdoors with an “interchangeable” power supply. For this “interchangability” to be efficient, a self-contained housing would be necessary around the power source, so that any disassembly and reassembly in the replacement process is kept to a minimum. Also, a battery is generally necessary when an internal combustion is present, in order to provide power to a starter to start the internal combustion engine.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the “semi-permanent” power source of Gumpper, interchangeable, and utilizing a housing and a battery in the power source of Gumpper, as taught by Wild.

Regarding claims 10, and 11, the “rapidly renewable power source” in claim 10 and the “hybrid power source” of claim 11 is the power source of Gumpper.

Regarding the method recited in claims 10 and 11, it is the Examiner’s position that it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the claimed method in the vehicle and power source of Gumpper, as modified by Wild. Because the prior art discloses all the structure necessary to perform the claimed functions, one of ordinary skill in the art would find the claimed method to be an obvious step in light of the disclosed structure.

Regarding the recitation of “lifting mechanism” in claim 13, see reference number 4 of Gumpper.

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13. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gumpper, US Patent 1,527,431 and Wild, US Patent 3,497,027, as applied to claim 12, and further in view of Dammeyer, et al, US Patent 5,738,187.

The combination vehicle of Gumpper fails to teach a lifting mechanism comprising a scissors type lifting mechanism

However, Dammeyer teaches a lifting mechanism comprising a scissor-type lifting mechanism (60). A scissors-type mechanism incorporated into a lifting mechanism is advantageous in that it increases versatility in lifting and transfer of the load.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a scissor-type lifting mechanism in the lifting mechanism of the combination vehicle of Gumpper, as taught by Dammeyer.

14. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wild, US Patent 3,497,027, in view of Drozd, US Patent 6,242,873.

Wild fails to teach that the electrical power generator is an external combustion engine. Wild instead teaches that the electrical power generator is an internal combustion engine.

However, both internal combustion engines and external combustion engines are known to power vehicles. In the case of external combustion engines, such as "turbines", "prototype" cars are now being, and have been developed to run on external combustion engines. Therefore, internal combustion engines and external combustion engines may be considered equivalent sources of power. Drozd provides a teaching of this (lines 7 and 8 of column 5). An external

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combustion engine may be advantageous over an internal combustion engine in that efficiencies may be increased, or emissions decreased, as well as allowing the use of alternative fuels to power the turbine.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize an external combustion engine for the electrical power generator of Wild, as taught by Drozd.

Regarding claim 17, the Examiner takes Official Notice that a gas turbine is an external combustion engine.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- A) Parker - teaches power module for a vehicle
- B) Gandofolo, et al - teaches fork lift construction
- C) Cosby - teaches fork lift modification to facilitate power module replacement
- D) White - teaches power module for a vehicle
- E) Umeda - teaches power module for a vehicle
- F) Auer, et al - teaches plug in power module for a toy
- G) Hayashi, et al - teaches a control and display system for an electric vehicle
- H) Jensen - teaches a replaceable power unit on a vehicle

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I) Japanese Patent 2000-85377 - teaches a power unit for a fork lift


16. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bryan Fischmann whose telephone number is (703) 306-5955. The examiner can normally be reached on Monday through Friday from 7:30 to 4:00.

If attempts to reach the Examiner by telephone are unsuccessful, the examiner's supervisor, Brian Johnson, can be reached on (703) 308-0885. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

BF

02/18/02


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